1000 River Street
Mail Stop 966A
Essex Junction, VT 05452

June 7th, 2013

Chief, RCRA Waste Management & UST Section
U.S. EPA Region 1 (OSRR07-1)
5 Post Office Square, Suite 100
Boston, MA 02109-3912

Reference: IBM Corporation, Essex Junction, VT Wastewater Treatment Sludge Delisting (40 CFR 261, Appendix IX – Waste Excluded Under §§ 260.20 and 260.22, Table 1 – Wastes Excluded from Non-Specific Sources)

Subject: Submission of Analytical Results for the Third Quarter of the Required Quarterly Verification Testing

Dear Ms. Deabay:

As outlined in IBM Corporation's Wastewater Treatment Sludge Delisting (40 CFR 261, Appendix IX – Waste Excluded Under §§ 260.20 and 260.22, Table 1 – Wastes Excluded from Non-Specific Sources), IBM is providing the third quarter of analytical results required as part of the quarterly verification testing process. Sample collection and analysis were performed in accordance with the approved Quality Assurance Project Plan (QAPP) dated 01/27/2011.

The analytical results for both representative samples (Attachment A) show all constituents in paragraph (1) of the delisting to be below detection limits and specified delisting levels.

If you have any questions concerning this information, please contact one of the following members of my staff:

Candice Callahan by telephone at 769-0579 or electronically at ccallaha@us.ibm.com
David Kost by telephone at 769-2761 or electronically at dlkost@us.ibm.com

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this demonstration and all attached documents, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Sincerely,

Thomas Jagielski
Manager of Environmental, Construction, & Planning, STG Environmental Affairs Focal Point

Attachments:

Attachment A: Analytical Results for Two Representative Samples with Corresponding Analytical Laboratory Reports and Laboratory QC Reports

Attachment A
Analytical Results for Two Representative Samples with Corresponding Analytical Laboratory Reports and Laboratory QC Reports

ENDYNE Inc.
Environmental Laboratories

IBM	
Mail Stop 966A	100290
Essex Jct, VT 05452	
Atten: Dave Kost	

PROJECT: WW Sludge TCLP Metals
WORK ORDER: **1304-05415**
DATE RECEIVED: April 10, 2013
DATE REPORTED: April 25, 2013
SAMPLER:

Laboratory Report

Enclosed please find the results of the analyses performed for the samples referenced on the attached chain of custody. All required method quality control elements including instrument calibration were performed in accordance with method requirements and determined to be acceptable unless otherwise noted.

The column labeled Lab/Tech in the accompanying report denotes the laboratory facility where the testing was performed and the technician who conducted the assay. A "W" designates the Williston, VT lab under NELAC certification ELAP 11263; "R" designates the Lebanon, NH facility under certification NH 2037 and "N" the Plattsburgh, NY lab under certification ELAP 11892. "Sub" indicates the testing was performed by a subcontracted laboratory. The accreditation status of the subcontracted lab is referenced in the corresponding NELAC and Qual fields.

The NELAC column also denotes the accreditation status of each laboratory for each reported parameter. "A" indicates the referenced laboratory is NELAC accredited for the parameter reported. "N" indicates the laboratory is not accredited. "U" indicates that NELAC does not offer accreditation for that parameter in that specific matrix. Test results denoted with an "A" meet all National Environmental Laboratory Accreditation Program requirements except where denoted by pertinent data qualifiers. Test results are representative of the samples as they were received at the laboratory

Endyne, Inc. warrants, to the best of its knowledge and belief, the accuracy of the analytical test results contained in this report, but makes no other warranty, expressed or implied, especially no warranties of merchantability or fitness for a particular purpose.

Reviewed by:

Harry B. Locker, Ph.D.
Laboratory Director

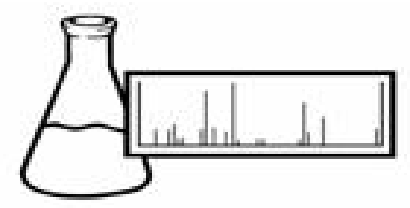
Laboratory Report DATE REPORTED: 04/25/2013

CLIENT: IBM
PROJECT: WW Sludge TCLP Metals

WORK ORDER: **1304-05415**
DATE RECEIVED: 04/10/2013

001 Site: Sludge Plugs Date Sampled: 4/10/13 Time: 12:24

Parameter	Result	Units	Method	Analysis Date/Time	Lab/Tech	NELAC	Qual.
TCLP Extract-SVOA/Metals	Completed		EPA 1311	4/11/13	W LG	A	
Arsenic, Total TCLP	< 0.50	mg/L	EPA 6010B	4/15/13	W LJF	A	
Barium, Total TCLP	< 1.0	mg/L	EPA 6010B	4/15/13	W LJF	A	
Cadmium, Total TCLP	< 0.020	mg/L	EPA 6010B	4/15/13	W LJF	A	
Chromium, Total TCLP	< 0.05	mg/L	EPA 6010B	4/15/13	W LJF	A	
Lead, Total TCLP	< 0.20	mg/L	EPA 6010B	4/16/13	W LJF	A	
Mercury, Total TCLP	< 0.010	mg/L	EPA 7470	4/16/13	W CM	A	
Nickel, Total TCLP	< 0.10	mg/L	EPA 6010B	4/15/13	W LJF	A	



ENDYNE, INC.
Laboratory Services

160 James Brown Drive
Williston, VT 05495
(802) 879-4333

QC Data Interpretation Report
EPA 7470 Mercury-TCLP

Client:	IBM	Work Order:	**1304-05415**
Project:	WW Sludge-Metals	Sample Date:	April 9-10, 2013
Report Date:	April 25. 2013	Analysis Date:	Aprl 16. 2013
Receive Date:	April 10, 2013	Analytical Batch #:	74273

Analytical Run Sequence

Run Sequence Identification	Result as ug/L	Target	% Recovery	Reported Value mg/L
Calibration Verification:	2.093	2	105%	
Laboratory Reagent Blank	0.017			
Independent Laboratory Fortified Blank:	2.099	2	105.0%	
Continuing Calibration Check	2.126	2	106%	
1304-05415-001	0.192			< 0.010
Matrix Spike of 05415-001	2.160	2	108%	
Matrix Spike Duplicate	2.174		0.6%	% Difference
Continuing Calibration Check	2.103	2	105%	

Notes:

All Method associated Quality Control was within acceptance limits

-Instrument Quantitation Limit is 1.0ug/L

- All TCLP analyses are analyzed at a 1-10 dilution.

-Calibration Verification acceptance limits:	90%-110%
-Laboratory Fortified Blank (QC) control limits:	90%-110%
-Laboratory Reagent Blank (LRB) was free of contaminant affecting analytical results.	
-Duplicate Percent Relative Standard Deviation Limits:	20%
-Matrix Spike Acceptance Limits:	85%-115%

Laboratory Data Quality Report
EPA 6010B- ICP Metals TCLP

ENDYNE INC.
Laboratory Services

160 James Brown Drive
Williston, VT 05495
(802) 879-4333 FAX 879-7103

Client: IBM
Project: WW Sludge-Metals
Sampled: April 9-10, 2013

Work Order #: 1304-05415
Date Received: April 10, 2013
Date Reported: April 25, 2013

Date Analyzed: April 15 & 16, 2013
Analytical Batch #: 74,589

	Int. Chk.		CCV		LFB		LRB	1304-04515-001		Spiked	MS (LFM)		MSD		CCV	
Parameter	mg/L	% Rec	mg/L	% Rec	mg/L	% Rec	(mg/L)	mg/L *	Reported	Sample **	mg/L	% Rec	mg/L	% Diff	mg/L	% Rec
Arsenic	0.0046	NA	0.9321	93%	1.0635	106%	0.0033	0.0129	< 0.5	0.0094	1.1136	111%	1.0848	2.6%	0.915	92%
Barium	0.4994	100%	1.0415	104%	1.10554	111%	-0.0044	0.0023	< 1.0	0.1507	1.1783	103%	1.1649	1.1%	1.0657	107%
Cadmium	0.9815	98.2%	0.0957	96%	0.1082	108.2%	-0.0001	-0.0014	< 0.02	0.0021	0.1114	111%	0.1081	3.0%	0.0939	94%
Chromium	0.4909	98.2%	0.6986	69.9%	1.0852	108.5%	0.0003	0.0011	< 0.05	0.0048	1.0904	109%	1.0679	2.1%	1.0029	100%
Lead ***	0.9973	99.7%	1.0327	103.3%	1.0937	109.4%	0.0022	0.0003	< 0.20	0.009	1.0571	106%	1.0878	2.9%	1.0645	106.5%
Nickel	0.9651	96.5%	0.9342	93%	1.0517	105.2%	-0.0004	-0.0002	< 0.10	0.0096	1.0653	107%	1.0365	2.7%	0.9295	93.0%

Notes:

* SOP is to digest at a 1-10 dilution. mg/L value is instrument measurement not accounting for dilution.

** Batch Matrix Spike performed on non-project sample.

*** Lead analyzed on 4/16/13, All other metals analyzed on 4/15/13

- NA: Not Available. Sample not assessed for this element.
- All QA parameters were within acceptance limits unless otherwise noted. Bold Font indicates value outside laboratory acceptance limits
- (Int. Chk.) Interference Check acceptance limits: 70 - 130%.
- (CCV) Continuing Calibration Verification acceptance limits: 90 - 110%.
- (LFB) Laboratory Fortified Blank digested in TCLP Buffer acceptance limits are 85-115%.
- (LRB) Laboratory Reagent Blank digested in TCLP Buffer was free of contaminant affecting analytical results.
- (MS) Matrix Spike acceptance limits: 70 - 130%. Values were determined to be within method acceptance limits unless noted.
- (MSD) Matrix Spike Duplicatee relative percent difference (RPD) acceptance criteria is < 20%.

ENDYNE, INC.

160 James Brown Drive
Williston, Vermont 05495
(802) 879-4333

CHAIN-OF-CUSTODY-RECORD

Special Reporting Instructions/PO#: _____ Nº 65958

Project Name:	Client/Contact Name: IBM	Sampler Name:
	Phone #:	Phone #:
State of Origin: VT ✓ NY __ NH __ Other __	Mailing Address:	Billing Address:
Endyne WO # 1304-05415		

Sample Location	Matrix	GRAB	COMP	Date/Time Sampled	Sample Containers No.	Sample Containers Type/Size	Sample Preservation	Analysis Required	FieldResults/Remarks	Due Date
IBM WW			✓	4-9-13 1143	1	500 ml	-	TCLP Metals NH3 NO3 Pb Cu		
				4-10-13 0552						
				4-10-13 1224						

Relinquished by:	Date/Time	Received by:	Date/Time	Received by:	Date/Time
[signature]	4-10-13 1430			[signature]	4/10/13 1430

1	pH	6	TKN	11	Total Solids	16	Sulfate	21	1664 TPH/FOG	26	8270 PAH Only
2	Chloride	7	Total P	12	TSS	17	Coliform (Specify)	22	8015 GRO	27	8081 Pest
3	Ammonia N	8	Total Diss. P	13	TDS	18	COD	23	8015 DRO	28	8082 PCB
4	Nitrite N	9	BOD	14	Turbidity	19	VT PCF	24	8260B	29	PP13 Metals
5	Nitrate N	10	Alkalinity	15	Conductivity	20	VOC Halocarbons	25	8270 B/N or Acid	30	Total RCRA8
31	Metals (Total, Diss.) Ag, Al, As, B, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, Hg, K, Mg, Mn, Mo, Na, Ni, Pb, Sb, Se, Sn, Tl, U, V, Zn										
32	TCLP (volatiles, semi-volatiles, metals, pesticides, herbicides)					33	Other				
34	Corrosivity	35	Ignitability	36	Reactivity	37	Other				
38	Other										

LAB USE ONLY
Delivery: Client
Temp: 8.8°C
Comment:

(White - Laboratory / Yellow - Client)

Page ____ of ____

ENDYNE Inc.
Environmental Laboratories

IBM	
Mail Stop 966A	100290
Essex Jct, VT 05452	
Atten: Dave Kost	

PROJECT: WW Sludge TCLP Metals
WORK ORDER: **1305-08714**
DATE RECEIVED: May 24, 2013
DATE REPORTED: June 06, 2013
SAMPLER: Roland Luxenburg

Laboratory Report

Enclosed please find the results of the analyses performed for the samples referenced on the attached chain of custody. All required method quality control elements including instrument calibration were performed in accordance with method requirements and determined to be acceptable unless otherwise noted.

The column labeled Lab/Tech in the accompanying report denotes the laboratory facility where the testing was performed and the technician who conducted the assay. A "W" designates the Williston, VT lab under NELAC certification ELAP 11263; "R" designates the Lebanon, NH facility under certification NH 2037 and "N" the Plattsburgh, NY lab under certification ELAP 11892. "Sub" indicates the testing was performed by a subcontracted laboratory. The accreditation status of the subcontracted lab is referenced in the corresponding NELAC and Qual fields.

The NELAC column also denotes the accreditation status of each laboratory for each reported parameter. "A" indicates the referenced laboratory is NELAC accredited for the parameter reported. "N" indicates the laboratory is not accredited. "U" indicates that NELAC does not offer accreditation for that parameter in that specific matrix. Test results denoted with an "A" meet all National Environmental Laboratory Accreditation Program requirements except where denoted by pertinent data qualifiers. Test results are representative of the samples as they were received at the laboratory

Endyne, Inc. warrants, to the best of its knowledge and belief, the accuracy of the analytical test results contained in this report, but makes no other warranty, expressed or implied, especially no warranties of merchantability or fitness for a particular purpose.

Reviewed by:

Harry B. Locker, Ph.D.
Laboratory Director

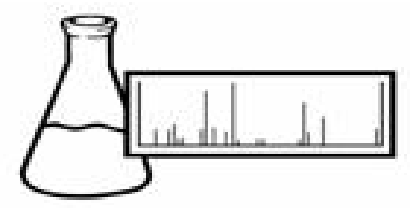
Laboratory Report DATE REPORTED: 06/06/2013

CLIENT: IBM
PROJECT: WW Sludge TCLP Metals

WORK ORDER: **1305-08714**
DATE RECEIVED: 05/24/2013

001 Site: Sludge Plugs Date Sampled: 5/14/13 Time: 5:30

Parameter	Result	Units	Method	Analysis Date/Time	Lab/Tech	NELAC	Qual.
TCLP Extract-SVOA/Metals	Completed		EPA 1311	5/28/13	W LG	A	
Arsenic, Total TCLP	< 0.50	mg/L	EPA 6010B	6/3/13	W LJF	A	
Barium, Total TCLP	< 1.0	mg/L	EPA 6010B	6/3/13	W LJF	A	
Cadmium, Total TCLP	< 0.020	mg/L	EPA 6010B	6/3/13	W LJF	A	
Chromium, Total TCLP	< 0.05	mg/L	EPA 6010B	6/3/13	W LJF	A	
Lead, Total TCLP	< 0.20	mg/L	EPA 6010B	6/3/13	W LJF	A	
Mercury, Total TCLP	< 0.010	mg/L	EPA 7470	6/5/13	W CM	A	
Nickel, Total TCLP	< 0.10	mg/L	EPA 6010B	6/3/13	W LJF	A	



ENDYNE, INC.
Laboratory Services

160 James Brown Drive
Williston, VT 05495
(802) 879-4333

QC Data Interpretation Report
EPA 7470 Mercury-TCLP

Client:	IBM	Work Order:	**1305-08714**
Project:	WW Sludge-Metals	Sample Date:	May 13-14 2013
Report Date:	June 6, 2013	Analysis Date:	June 5, 2013
Receive Date:	May 15, 2013	Analytical Batch #:	76541

Analytical Run Sequence

Run Sequence Identification	Result as ug/L	Target	% Recovery	Reported Value mg/L
Calibration Verification:	2.066	2	103%	
Laboratory Reagent Blank	-0.019			
Independent Laboratory Fortified Blank:	1.978	2	98.9%	
1305-08714-001	-0.016			< 0.010
Matrix Spike of 08714-001	1.939	2	97%	
Matrix Spike Duplicate	1.932		0.4%	% Difference
Continuing Calibration Check	2.106	2	105%	

Notes:

All Method associated Quality Control was within acceptance limits

-Instrument Quantitation Limit is 1.0ug/L

- All TCLP analyses are analyzed at a 1-10 dilution.

-Calibration Verification acceptance limits:	90%-110%
-Laboratory Fortified Blank (QC) control limits:	90%-110%

-Laboratory Reagent Blank (LRB) was free of contaminant affecting analytical results.

-Duplicate Percent Relative Standard Deviation Limits:	20%
-Matrix Spike Acceptance Limits:	85%-115%

Laboratory Data Quality Report
EPA 6010B- ICP Metals TCLP

ENDYNE INC.
Laboratory Services

160 James Brown Drive
Williston, VT 05495
(802) 879-4333 FAX 879-7103

Client: IBM
Project: WW Sludge-Metals
Sampled: May 13-14, 2013

Work Order #: 1305-08714
Date Received: May 15, 2013
Date Reported: June 6, 2013

Date Analyzed: June 3, 2013
Analytical Batch #: 76,565

	Int. Chk.		CCV		LFB		LRB	1305-08714-001		MS (LFM)		MSD		CCV	
Parameter	mg/L	% Rec	mg/L	% Rec	mg/L	% Rec	(mg/L)	mg/L *	Reported	mg/L	% Rec	mg/L	% Diff	mg/L	% Rec
Arsenic	-0.0118	NA	1.004	100%	0.9976	99.8%	-0.0032	-0.0126	< 0.5	1.0519	105.2%	1.0325	1.9%	0.9962	99.6%
Barium	0.4909	98.2%	0.9948	99.5%	1.0126	101.3%	-0.0004	0.0068	< 1.0	0.9752	97.5%	0.9684	0.7%	0.9985	99.9%
Cadmium	1.005	100.5%	0.1003	100.3%	0.0987	98.7%	0.0000	0.0003	< 0.02	0.0979	97.9%	0.0969	1.0%	0.0995	99.5%
Chromium	0.4994	99.9%	1.0285	102.9%	1.0367	103.7%	0.0010	0.0031	< 0.05	1.0294	102.9%	1.0209	0.8%	1.0236	102.4%
Lead ***	0.9329	93.3%	1.0031	100.3%	0.9996	100.0%	0.0021	-0.0015	< 0.20	0.9574	95.7%	0.9465	1.1%	0.9788	97.9%
Nickel	0.9514	95.1%	1.0021	100.2%	0.9982	99.8%	0.0002	0.0020	< 0.10	0.9716	97.2%	0.9592	1.3%	0.9944	99.4%

Notes:

* SOP is to digest at a 1-10 dilution. mg/L value is instrument measurement not accounting for dilution.
- NA: Not Available. Sample not assessed for this element.
- All QA parameters were within acceptance limits unless otherwise noted. Bold Font indicates value outside laboratory acceptance limits
- (Int. Chk.) Interference Check acceptance limits: 70 - 130%.
- (CCV) Continuing Calibration Verification acceptance limits: 90 - 110%.
- (LFB) Laboratory Fortified Blank digested in TCLP Buffer acceptance limits are 85-115%.
- (LRB) Laboratory Reagent Blank digested in TCLP Buffer was free of contaminant affecting analytical results.
- (MS) Matrix Spike acceptance limits: 70 - 130%. Values were determined to be within method acceptance limits unless noted.
- (MSD) Matrix Spike Duplicatee relative percent difference (RPD) acceptance criteria is < 20%.

WW Sludge TCLP Metals

Endyne Inc. COC

Prepared: 4/23/13

Lab Use WO# 1305-08714

Bill to:
IBM
Mail Stop 964B
Essex Jct VT 05452
Ph: 769-2761

Report to:
Dave Kost
IBM
Mail Stop 966A
Essex Jct VT 05452
IBM_WW

Cust # 100290

IBMWW

W-100290ST

Facility ID: Smp Pt: Categ: Smp Type Repl Ind: Compl Ind: Y / N

Sludge Plugs

Final Sample Date/Time: 5/14/0530@ Sampler: RS

Additional Sample Collection Date/Times: 5/13/13 @0615 5/13/13 @1245
5/14/13 @0530 __/__/__@ __/__/__@

TCLP Extraction-SVOA/Metals 8oz or 16oz Plastic Bottle(~200g) < 6 Celsius

TCLP Metals ICP Digestion TCLP Metals Post TCLP Ext HNO3
Arsenic, Total TCLP
Barium, Total TCLP
Cadmium, Total TCLP
Chromium, Total TCLP
Lead, Total TCLP
Mercury, Total TCLP
Nickel, Total TCLP

Sample colllection is composite over time.
Upon arrival at Endyne, all plugs are broken up and sample is thoroughly mixed.

Special reporting instructions; e-mail group WWIBMSLUDGE
(includes Candice Callahan, Clarissa Santos & David Kost)

analysis was not originally requested. Client came in 5/24/13 to request this set. RRL 5/24/13

Relinquished by: [signature] 5/15/13 Date Time
Accepted by: [signature] Eileen Toomey 5/24/13 @9:40 Date Time

Relinquished by: Date Time
Received by: Date Time

Sites/Parameters correct as listed. Client Initials RRL

Client Authorization to use Subcontract lab Client Initials ______

Sample origin: VT ☑ NH ☐ NY ☐ Other ☐

Special reporting instructions: (PO#)

Requested Turnaround Time: Routine: Rush Due Date ______

Delv: Tmpl Ck **Lab use Only**
Temp C: Log by
Comment:

ENDYNE Inc.
www.endynelabs.com

160 James Brown Dr.
Williston, VT 05495
Ph 802-879-4333
Fax 802-879-7103

56 Etna Road
Lebanon, NH 03766
Ph 603-678-4891
Fax 603-678-4893

315 New York Rd.
Plattsburgh, NY 12903
Ph 518-563-1720
Fax 518-563-0052